DIGITAL IMAGE
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Annotated Sheet for Figure(s) 1&2

FIG. 1 (PRIOR ART)

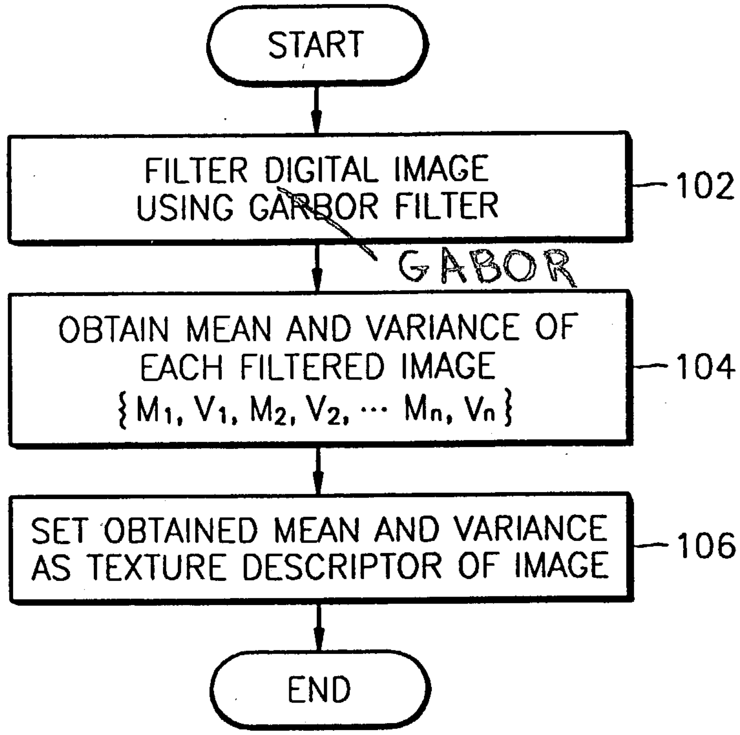
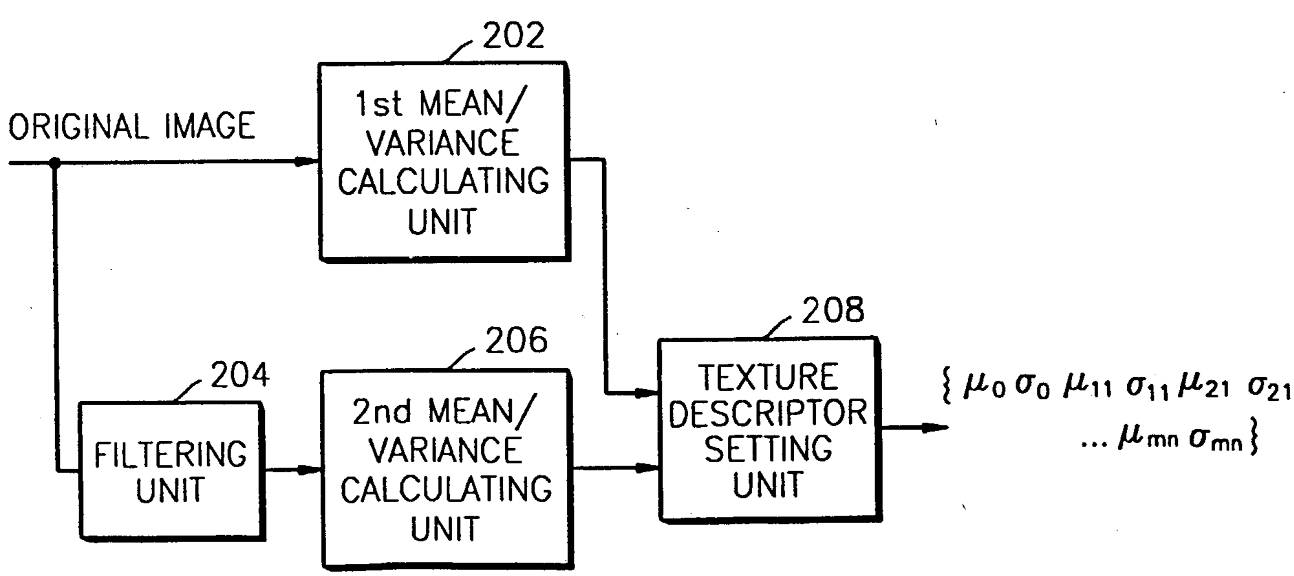


FIG. 2



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Annotated Sheet for Figure(s) 3&4

FIG. 3

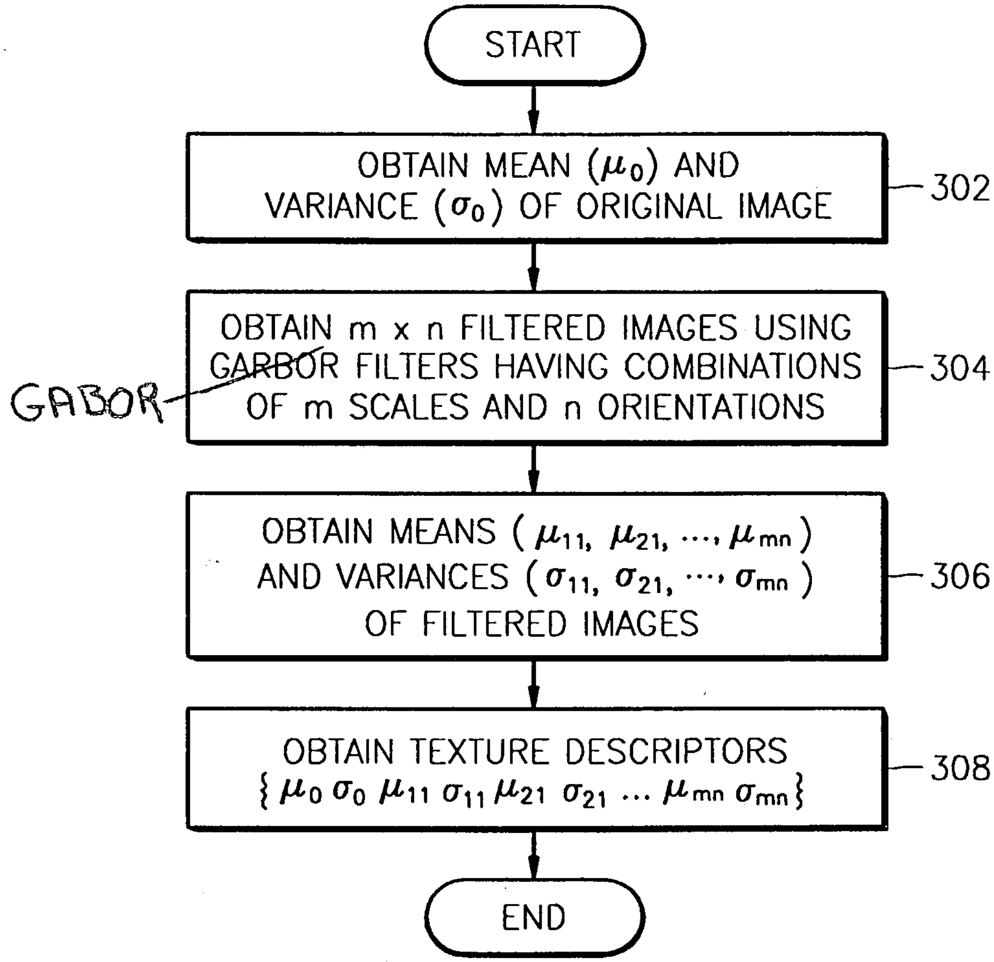
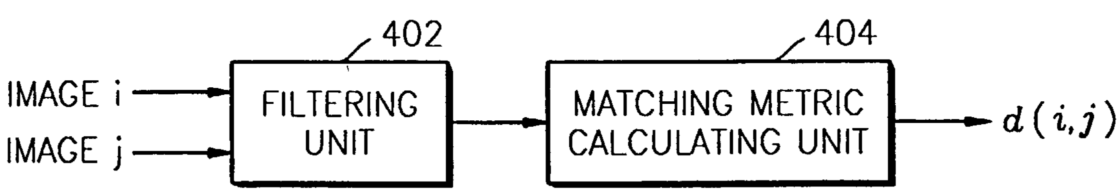


FIG. 4



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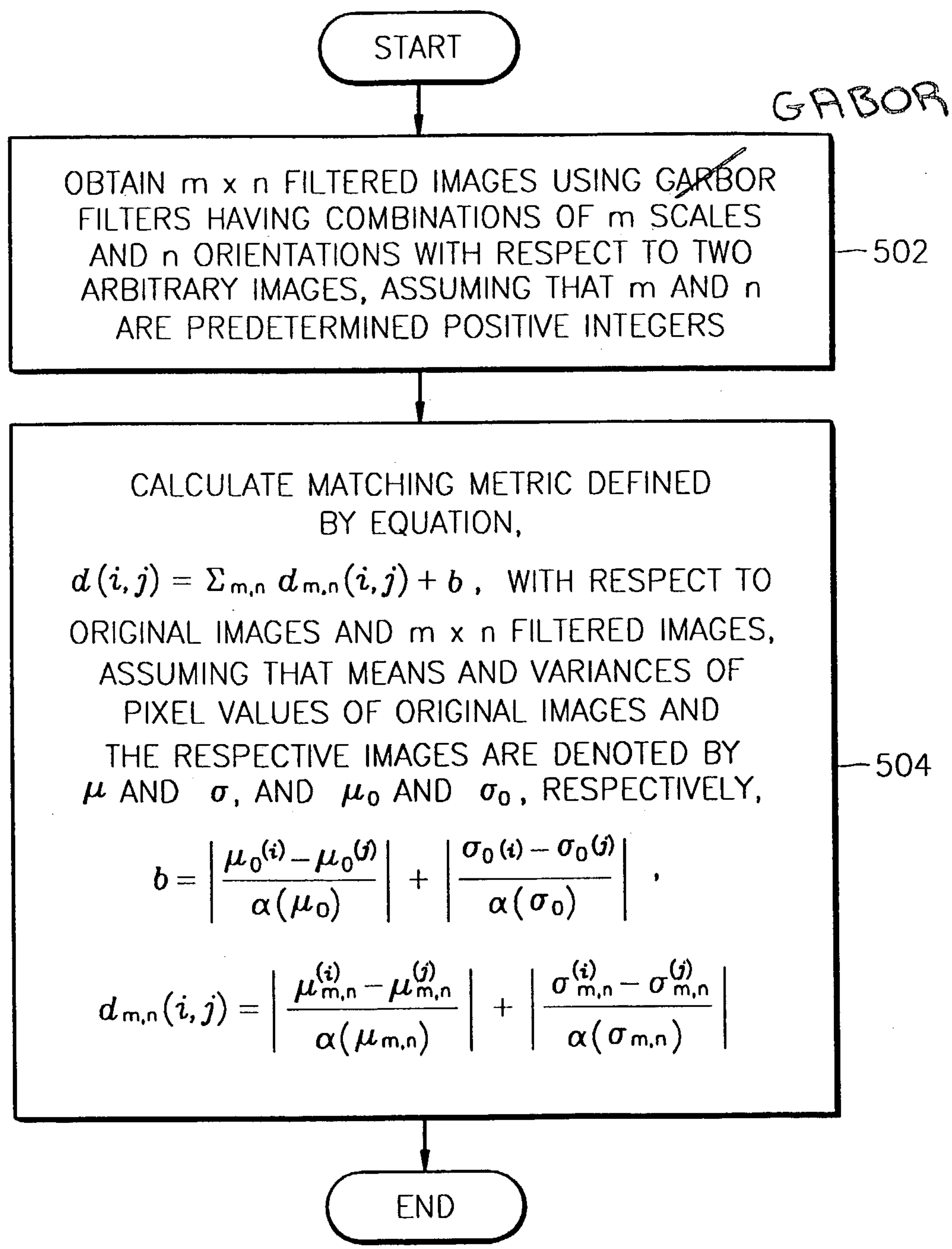
Annotated Sheet for Figure(s) 5

FIG. 5



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Annotated Sheet for Figure(s) 6

FIG. 6

START

GABOR

OBTAIN m x n FILTERED IMAGES USING ~~GARBOR~~ FILTERS HAVING COMBINATIONS OF m SCALES AND n ORIENTATIONS WITH RESPECT TO TWO ARBITRARY IMAGES, ASSUMING THAT m AND n ARE PREDETERMINED POSITIVE INTEGERS — 602

CALCULATE MATCHING METRIC DEFINED BY EQUATION,

$$d_{m,n}(i,j) = \min_{1\le t\le K}\left[\sum_{m,n}\left(\left|\frac{\mu^{(i)}_{m,n}}{\alpha(\mu_{m,n})} - \frac{\mu^{(j)}_{m,n\oplus t}}{\alpha(\mu_{m,n})}\right| + \left|\frac{\sigma^{(i)}_{m,n}}{\alpha(\sigma_{m,n})} - \frac{\sigma^{(j)}_{m,n\oplus t}}{\alpha(\sigma_{m,n})}\right|\right)\right] + b,$$

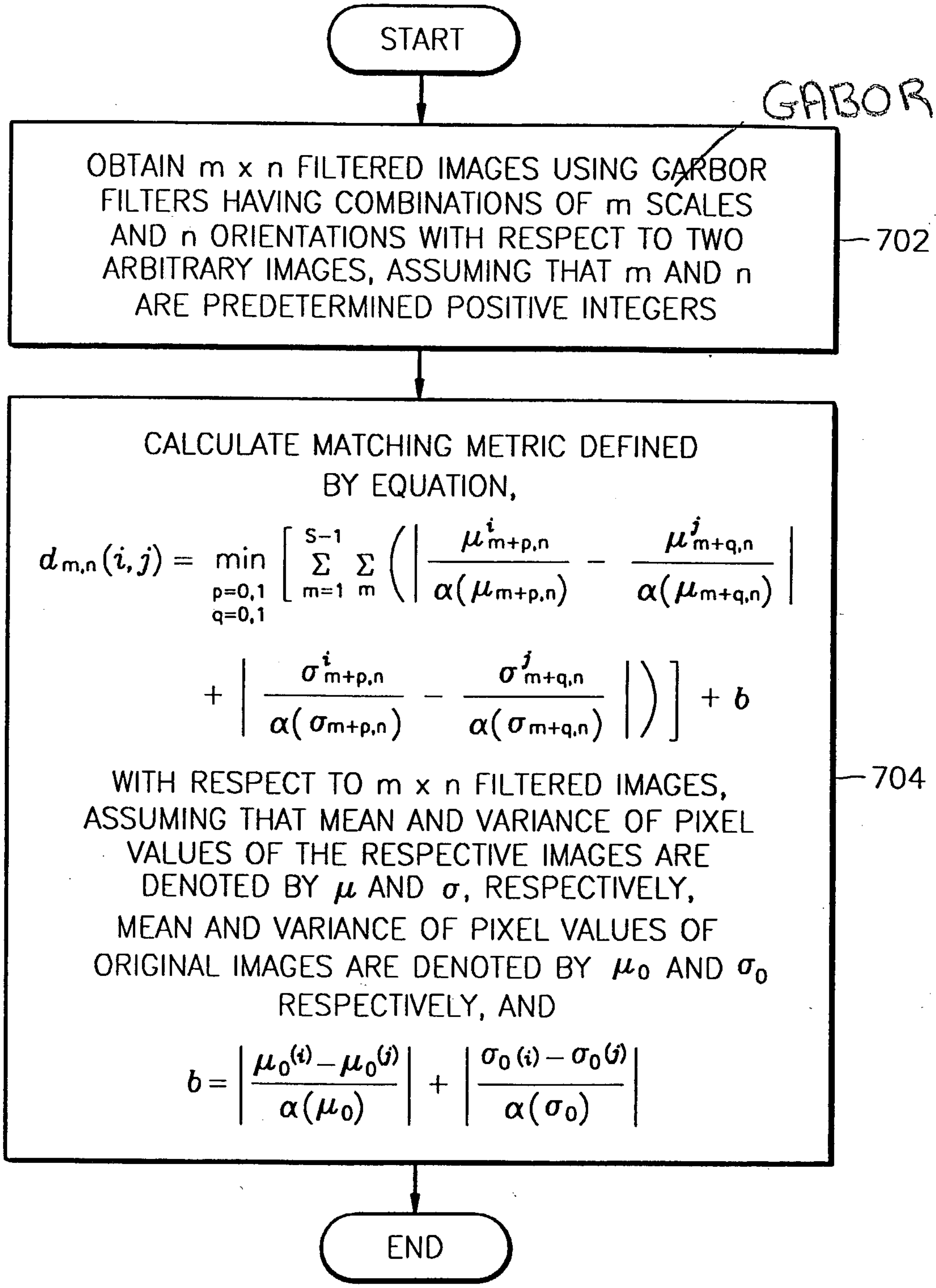
WITH RESPECT TO m x n FILTERED IMAGES, ASSUMING THAT MEAN AND VARIANCE OF PIXEL VALUES OF THE RESPECTIVE IMAGES ARE DENOTED BY μ AND σ, RESPECTIVELY, MEAN AND VARIANCE OF PIXEL VALUES OF ORIGINAL IMAGES ARE DENOTED BY μ_0 AND σ_0 RESPECTIVELY, K IS A PREDETERMINED POSITIVE INTEGER REPRESENTING THE NUMBER OF ORIENTATION COEFFICIENTS TO BE CONSIDERED,

$$b = \left|\frac{\mu_0^{(i)} - \mu_0^{(j)}}{\alpha(\mu_0)}\right| + \left|\frac{\sigma_0^{(i)} - \sigma_0^{(j)}}{\alpha(\sigma_0)}\right|,$$

AND $\oplus$ DENOTES A MODULO-SHIFT FUNCTION — 604

END

FIG. 7


START
GABOR
OBTAIN m x n FILTERED IMAGES USING GARBOR FILTERS HAVING COMBINATIONS OF m SCALES AND n ORIENTATIONS WITH RESPECT TO TWO ARBITRARY IMAGES, ASSUMING THAT m AND n ARE PREDETERMINED POSITIVE INTEGERS
702
CALCULATE MATCHING METRIC DEFINED BY EQUATION,
$$d_{m,n}(i,j) = \min_{\substack{p=0,1\\ q=0,1}} \left[\sum_{m=1}^{S-1} \sum_{m} \left(\left| \frac{\mu^{i}_{m+p,n}}{\alpha(\mu_{m+p,n})} - \frac{\mu^{j}_{m+q,n}}{\alpha(\mu_{m+q,n})} \right| + \left| \frac{\sigma^{i}_{m+p,n}}{\alpha(\sigma_{m+p,n})} - \frac{\sigma^{j}_{m+q,n}}{\alpha(\sigma_{m+q,n})} \right| \right) \right] + b$$
WITH RESPECT TO m x n FILTERED IMAGES, ASSUMING THAT MEAN AND VARIANCE OF PIXEL VALUES OF THE RESPECTIVE IMAGES ARE DENOTED BY μ AND σ, RESPECTIVELY, MEAN AND VARIANCE OF PIXEL VALUES OF ORIGINAL IMAGES ARE DENOTED BY μ_0 AND σ_0 RESPECTIVELY, AND
$$b = \left| \frac{\mu_0^{(i)} - \mu_0^{(j)}}{\alpha(\mu_0)} \right| + \left| \frac{\sigma_0(i) - \sigma_0(j)}{\alpha(\sigma_0)} \right|$$
704
END